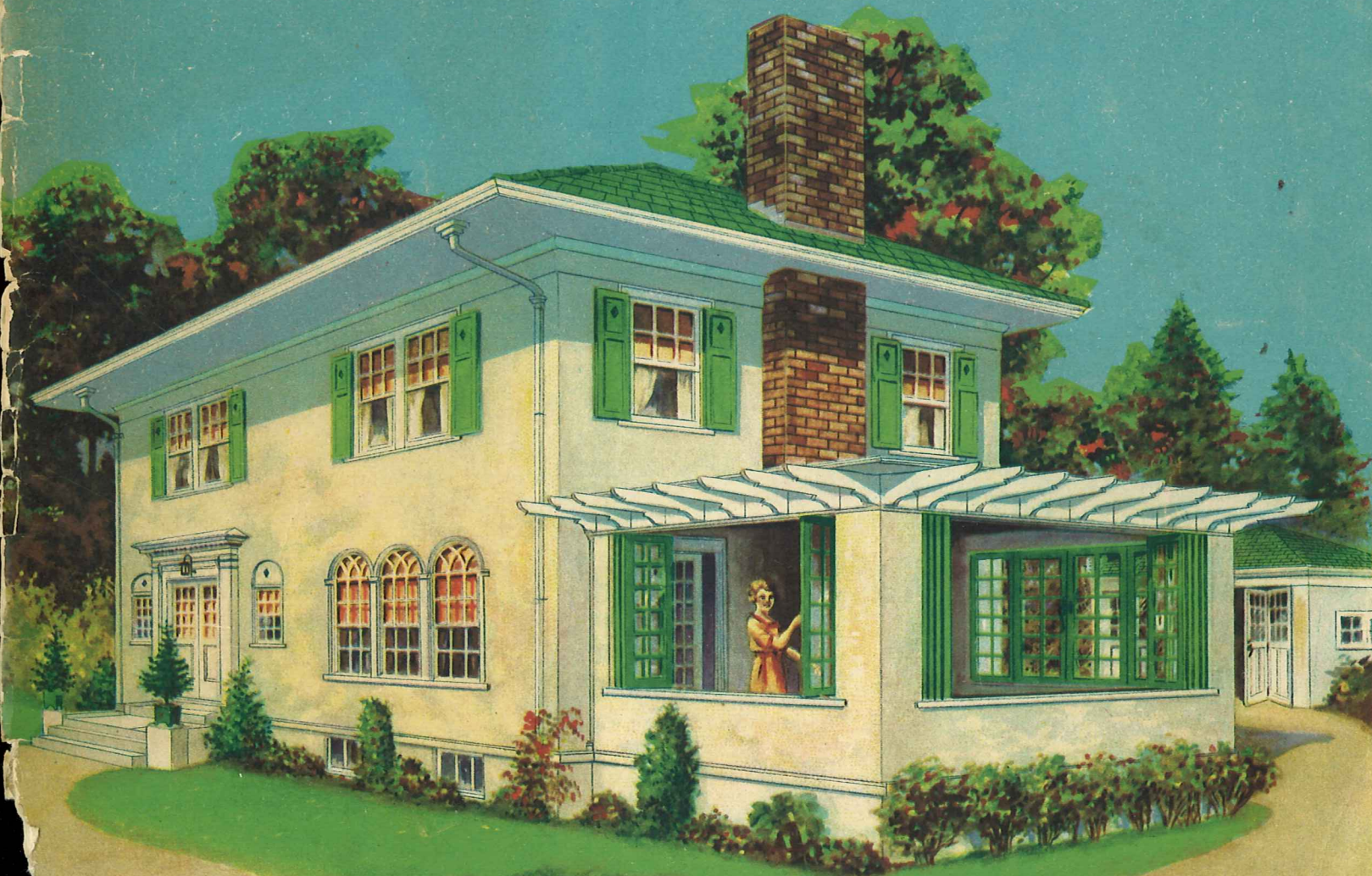


8.000

Modern Hardware for Your Home



Richards-Wilcox Mfg. Co.
"A HANGER FOR ANY DOOR THAT SLIDES"



MULTIFOLD WINDOW HARDWARE
for the Modern Sun Parlor & Sleeping Porch

Aurora Ill. U.S.A.



Largest Manufacturers of this Equipment in the World

THE HOME BEAUTIFUL

BACK in the old days when chivalry ran rampant, and life was cheap, a man surrounded himself with turrets, battlements, bridges, and moats, and made the windows as small as possible, for protection. Today the homebuilder surrounds himself with things of beauty rather than those of strength, such as beautiful lawn, hedges, artistic fences, inviting porches and gardens, and builds as many and as large windows in his house as he consistently can without sacrificing all privacy. For he no longer fears the raids of marauding bands but the caustic criticism of his friends and neighbors. To him his house is still a castle, but a peaceful one.

Where the medieval home was mysterious and repelling, the modern home is frank and appealing. Open spaces, such as windows and porches, have done this. Our complete espousal of the fresh-air doctrine has caused some radical changes in building ideas.

That is why the sun parlor and sleeping porch are today fundamentals of a home. They supply in large measure the air and sunshine which make the home a real place in which to live. They are the reasons for the beauty and appealing charm of the delightful home pictured on the front cover. For here the distinctive feature of the whole house is the "sunshine" parlor built at one end of the house under a pergola roof. This porch has been skillfully encased in walls of glass, which are really sets of folding and sliding sash fastened together in groups of five and two with a split mullion, part moving each way. These windows are equipped with "AiR-Way" fixtures.

"AiR-Way" multifold window hardware can be applied to any number of sash the builder may wish to place in a row. The height of the window does not affect the operation of this hardware, but the hardware is designed for sash not more than 12 square feet in area and maximum width of sash not to exceed 24 inches. "AiR-Way" multifold window hardware makes possible all of the features desirable in window construction of the sun parlor, sleeping porch and bungalow. It affords perfect ventilation and light—closes weathertight and keeps out wind and storm. They can be pushed back

close against the porch pillars, opening the entire porch, or can be closed in cold and inclement weather. In the warm months screens can be placed outside of these sash without interfering with their operation.

The house itself is an excellent example of the familiar square type hip-roof two-story home, always an economical house to build because of its simplicity in design, yet inheriting a real charm and warmth from its colonial antecedents.

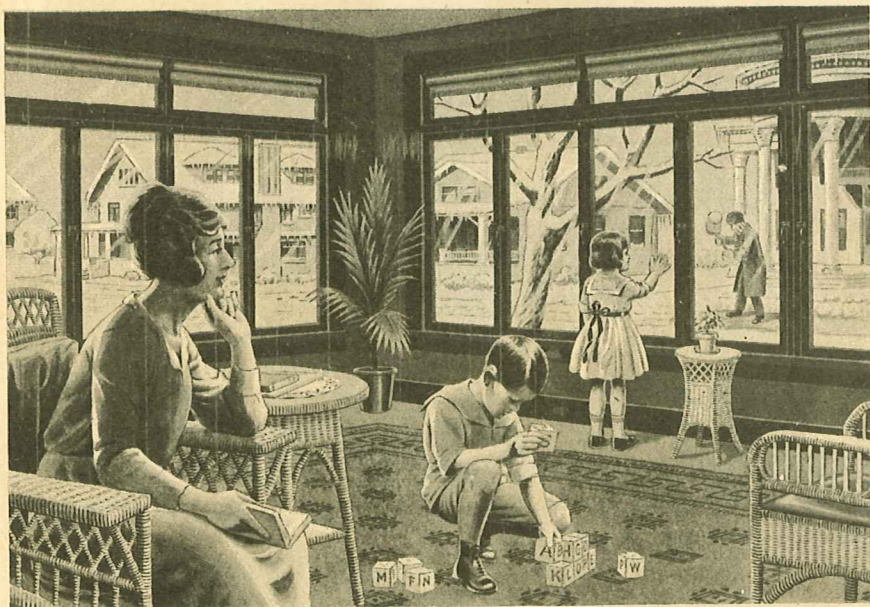
The exterior is stucco on hollow tile. If the latter is not desired it can be applied over wood or metal lath. The front entrance, located at one end of the main elevation, is distinctly colonial in character.

Inside the front door is a small vestibule with side clothes closets. An open doorway to the right leads into a large and spacious living room well worthy of its name, for it occupies about 450 square feet of space and represents the maximum of comfort. In the wall facing the side porch is a large open brick fireplace "blest with that charm, the certainty to please," and on each side of this fireplace are doors of the vanishing French type opening out to the sun parlor, which has already been described. This is a very convenient type of door, sliding on special "R-W" vanishing door hardware. These doors slide into pockets in the wall on each side of the doorway. Triple windows on the other side of the living room supplement the excellent light afforded from the sun parlor, and make the room one of cheer and warmth. Opposite the sun parlor and opening into the living room by the same kind of sliding vanishing doors is the dining room, a room of appropriate size, 13 by 16 feet. It is connected with the kitchen by a swinging door. The kitchen is ideally located with regard to the service of meals and completely equipped. At one side is a small pantry fitted with a disappearing door of "R-W" hardware, thus eliminating any inconvenience from swinging doors in the small kitchen.

On the second floor the sleeping rooms have been segregated. They consist of four bedrooms and a sleeping porch located in the wing above the kitchen. The bedrooms are very generous in size, being 12 by 10, 15 by 14, and two 14 by 10 feet. Each bedroom has windows on two sides, and the sleeping porch equipped with the same type of sliding and folding casement window as the sun parlor. "R-W" disappearing and sliding doors are installed in the closets.

There is an attractive garage in the rear of the house. It is stucco and harmonizes in architectural lines with the house, making a very satisfactory building group. The garage is large enough to hold two cars and is equipped with sliding and folding doors hung on Richards-Wilcox "Slidetite" garage door hardware. This is a combination door made up of several panels which fold up and slide toward both walls, very much in the same fashion as the windows in use on the sun parlor of the house.

See inside back cover for floor plans of The Home Beautiful.



A cheery sun parlor in winter, equipped with "AiR-Way" fixtures. Windows tight, glass area great, effect luxurious

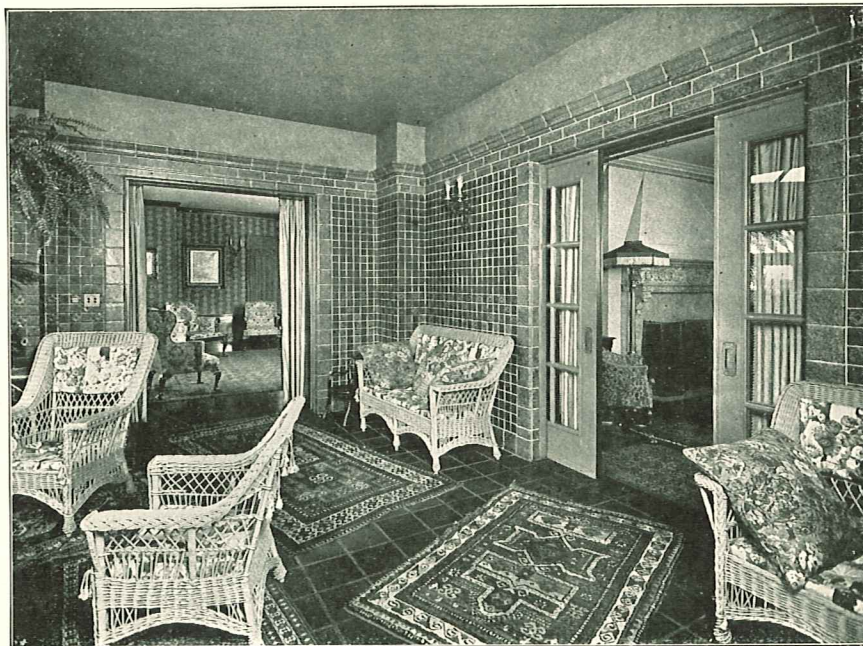
Richardson-Wilcox

"A Hanger for any door that slides"

Vanishing Doors in the Modern Home

There is not a flat, apartment or house of any pretentiousness anywhere that would not be made more modernly convenient by the installation of vanishing doors

POSSIBLY the general inclination to overlook the advantages to be gained from vanishing doors in the modern home has developed from impressions gained in early childhood of the sliding doors that often times required the united efforts of a strong family to make them operate.



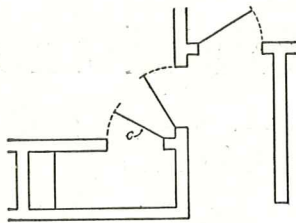
Modern Vanishing French Doors Hung on Adjustable Ball-Bearing Hangers, Disappear Silently Into the Walls.

That forerunner of the past half century of door hanger development is far removed from the present day silently vanishing door which disappears into the wall on adjustable ball-bearing hangers and woodlined track.

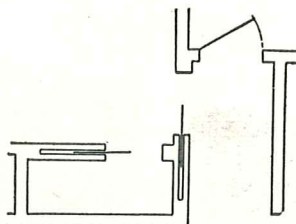
The above installation, for instance, shows a "French" door hung on R-W sliding door hangers. The utility and ornamental possibilities of having this door vanish into the wall instead of swinging into the room are obvious. The doors interfere in no way with draperies, furniture, and fixtures of the home.

Richardson-Wilcox

"A Hanger for any door that slides"



Plan showing the possibility of improvements to be gained by the substitution of sliding doors for swinging closet doors.

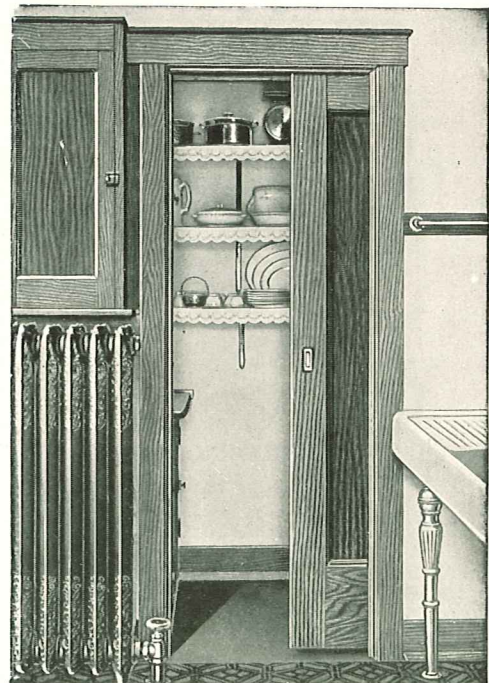


In planning homes where it is desired to finish adjacent rooms in different effects, the sliding door obviates the embarrassment to harmony caused by opening a door of conflicting finish into an otherwise pleasing environment. For instance, the mahogany door of a white trimmed dining room could not swing into a cypress trimmed room adjacent without embarrassment, while a sliding door between the two rooms could be finished on either side to suit the respective trims of the adjacent rooms and would never conflict with either one.

The plans above show two swinging doors opening toward each other, which could palpably be improved by the installation of sliding doors, as illustrated. The occupants of thousands of apartments, particularly in our large cities where space is at a premium, have found it necessary to substitute hanging drapes in cases like this where closet doors interfere with access to the closet.

The perplexity of conveniently closing the pantry doorway without interfering with the ice box, the sink, the gas stove, the radiator, is easily removed by the installation of a sliding door as shown below.

The use of vanishing doors is now becoming more general than ever before. Space is one of the most desired features in the bungalow, apartment or house and architects are taking advantage of the space saving features which vanishing doors permit and are specifying them in their plans. Confer with your architect on this point before you make a decision.

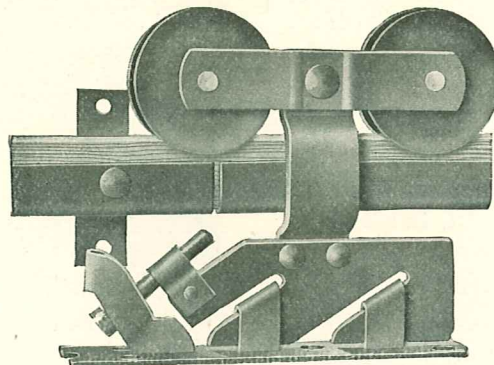


The perplexity of conveniently closing the pantry door without interfering with the sink, the radiator and the ice box, is removed by installing a sliding door.

Richardson-Wilcox

"A Hanger for any door that slides"

R-W No. 11 XXX Brass Bushed Bearing House Door Hanger



Clearance required
above top of door
7 inches.

From top of door
to top of track,
3 3/4 inches.

Minimum width
of wall pocket,
3 inches.

Track, hard maple and steel, No. 9 type; full sets for 7-foot double; half sets for 4-foot single opening. Wheels, steel, 2 1/2 inches diameter with vulcanized fibre centers; noiseless. Bearings, brass bushed. Finish, blue lacquer. Packed complete with screws, overhead center stop, and floor guides. weight, full set: hangers, 9 pounds; track 8 3/4 pounds.

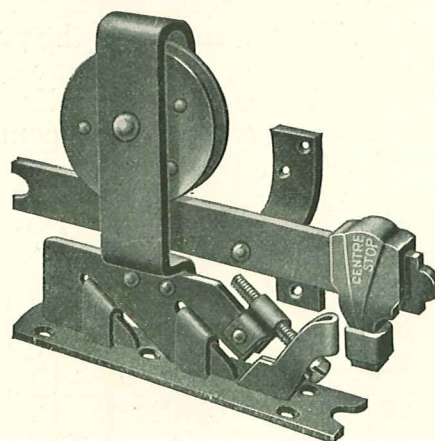
PRICE LIST

Full set, including track (14 ft.)	\$6.00
Half set, including track (8 ft.)	3.00
Extra track, No. 9, per foot .....	.08

Discount

Note—No. 9 track is provided with cut-off slot one foot from each end, to allow for variation in size of opening.

R-W No. 12 Model Roller-Bearing Steel Single-Track House Door Hanger



Clearance required
above top of door
7 1/2 inches.

From top of door
to top of track,
3 5/8 inches.

Minimum width
of wall pocket,
8 inches

Track, 1 1/4 x 3/16-inch steel, No. 63 type; full sets for 7-foot double; half sets for 4-foot single opening. Wheels, steel 3 3/8 inches diameter with vulcanized fibre centers. Bearings, steel rollers. Finish, blue lacquer. Packed complete with screws, overhead center stop, and floor guides. Weight, full set: hangers, 10 pounds; track, 14 pounds.

PRICE LIST

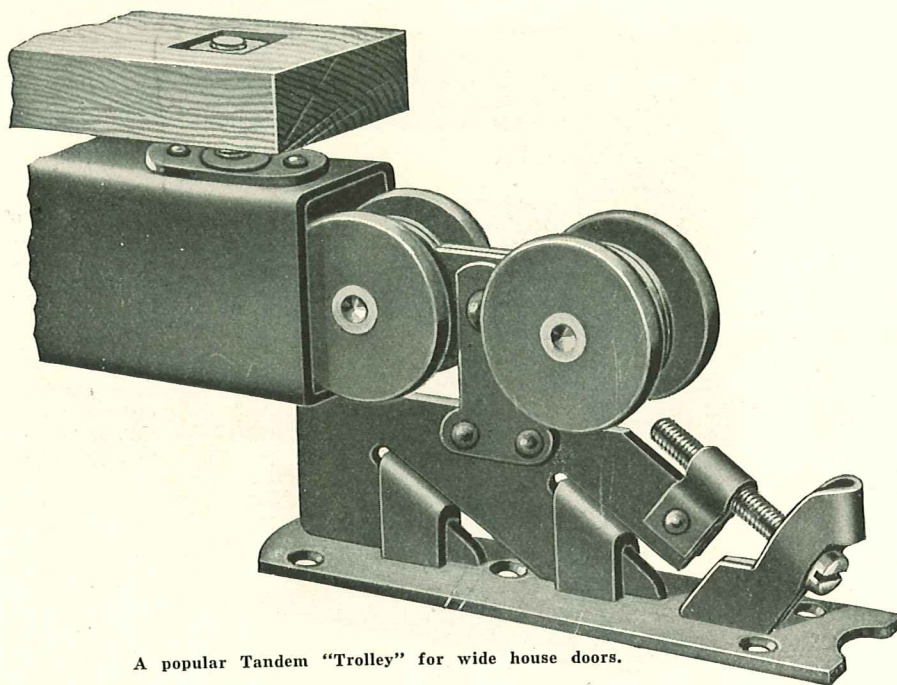
Full set, including track (14 ft.)	\$6.00
Half set, including track (8 ft.)	3.00
Extra track, No. 63, per foot .....	.08

Discount

Richards - Wilcox

"A Hanger for any door that slides"

R-W No. 16 Twin Trolley Ball-Bearing House Door Hanger



Distance top of door to bottom of heading timber, $6\frac{1}{4}$ inches.

Minimum width of wall pocket, $2\frac{1}{4}$ inches.

Track can be easily removed without injury to plastered walls.

A popular Tandem "Trolley" for wide house doors.

Track, No. 16 gauge steel, No. 19 type, furnished with wood header, adjustable as illustrated. Wheels, vulcanized fibre, $2\frac{1}{8}$ inches diameter. Bearings, steel balls. Finish, blue lacquer. Packed complete with screws, overhead center stop, and floor guides. Weight, full set: hangers, 7 pounds; track, per foot, $2\frac{1}{4}$ pounds.

PRICE LIST OF HANGERS AND TRACK

DOUBLE DOORS			SINGLE DOORS		
Number	Width of Opening	List	Number	Width of Opening	List
16-24	4 feet	\$7.00	16-12½	2½ feet	\$3.50
16-24½	4½ feet	7.00	16-13	3 feet	3.50
16-25	5 feet	7.00	16-13½	3½ feet	3.75
16-25½	5½ feet	7.00	16-14	4 feet	4.00
16-26	6 feet	7.00	16-14½	4½ feet	4.25
16-26½	6½ feet	7.25	16-15	5 feet	4.50
16-27	7 feet	7.50	16-15½	5½ feet	5.00
16-27½	7½ feet	7.75	16-16	6 feet	5.25
16-28	8 feet	8.00	16-16½	6½ feet	5.50
16-29	9 feet	8.50	16-17	7 feet	5.75
16-210	10 feet	9.00	16-17½	7½ feet	6.00
			16-18	8 feet	6.25

Hangers only, double doors..... \$4.00
Hangers only, single doors 2.00

Discount.....

Note—When ordering track without hangers, the list price is found by deducting the list price of hangers without track from the list prices given for various lengths. Order by number.

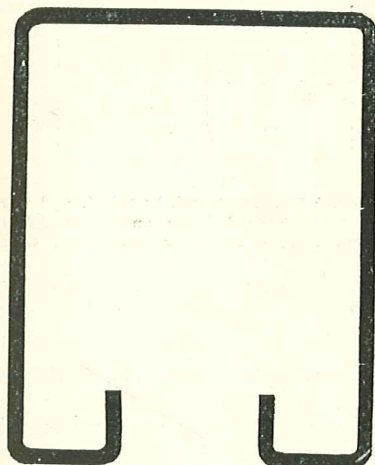
Richards - Wilcox

"A Hanger for any door that slides"

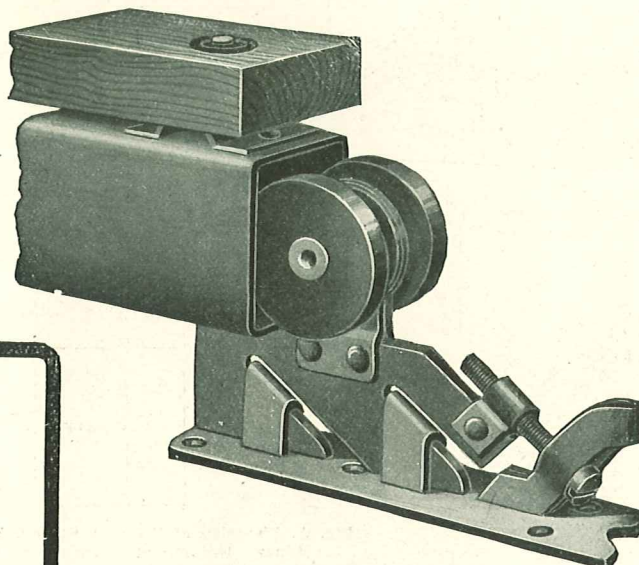
R-W No. 19 Hero Trolley Ball-Bearing House Door Hanger

Track can be easily removed without injury to plastered walls.

For doors wider than five feet we recommend No. 16 hangers.



Full Size Cross-Section of No. 19 Trolley Track Less Header



Distance top of door to bottom of heading timber, 6 $\frac{1}{4}$ inches.
Minimum width of wall pocket, 2 $\frac{1}{4}$ inches.

The most popular "Trolley" for homes of moderate cost.

Track, No. 16 gauge steel, No. 19 type, furnished with wood header, adjustable as illustrated. Wheels, vulcanized fibre, 2 $\frac{1}{8}$ inches diameter. Bearings, steel balls. Finish, blue lacquer. Packed complete with screws, overhead center stop, and floor guides. Weight, full set: hangers, 5 $\frac{1}{2}$ pounds; track, per foot, 2 $\frac{1}{4}$ pounds.

PRICE LIST OF HANGERS AND TRACK

DOUBLE DOORS			SINGLE DOORS		
Number	Width of Opening	List	Number	Width of Opening	List
19-24	4 feet	\$6.00	19-12 $\frac{1}{2}$	2 $\frac{1}{2}$ feet	\$3.00
19-24 $\frac{1}{2}$	4 $\frac{1}{2}$ feet	6.00	19-13	3 feet	3.00
19-25	5 feet	6.00	19-13 $\frac{1}{2}$	3 $\frac{1}{2}$ feet	3.25
19-25 $\frac{1}{2}$	5 $\frac{1}{2}$ feet	6.00	19-14	4 feet	3.50
19-26	6 feet	6.00	19-14 $\frac{1}{2}$	4 $\frac{1}{2}$ feet	3.75
19-26 $\frac{1}{2}$	6 $\frac{1}{2}$ feet	6.25	19-15	5 feet	4.00
19-27	7 feet	6.50	19-15 $\frac{1}{2}$	5 $\frac{1}{2}$ feet	4.50
19-27 $\frac{1}{2}$	7 $\frac{1}{2}$ feet	6.75	19-16	6 feet	4.75
19-28	8 feet	7.00	19-16 $\frac{1}{2}$	6 $\frac{1}{2}$ feet	5.00
19-29	9 feet	7.50	19-17	7 feet	5.25
19-210	10 feet	8.00	19-17 $\frac{1}{2}$	7 $\frac{1}{2}$ feet	5.50
			19-18	8 feet	5.75

Hangers only, double doors..... \$3.00
Hangers only, single doors 1.50

Discount.....

Note—When ordering track without hangers, the list price is found by deducting the list price of hangers without track from the list prices given for various lengths. Order by number.

Richardson-Wilcox

"A Hanger for any door that slides"

How To Adjust Vanishing Doors If The Building Settles

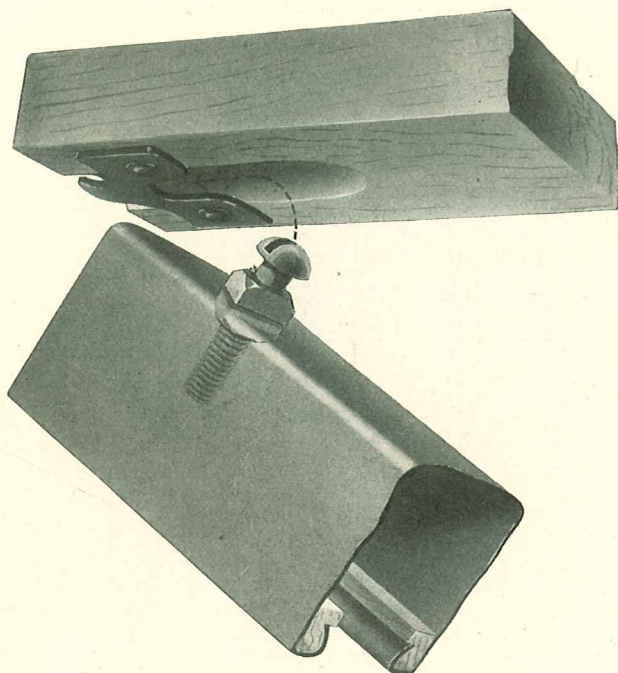


Fig. B. Close View Showing Slotted Plate and Adjusting Screw.

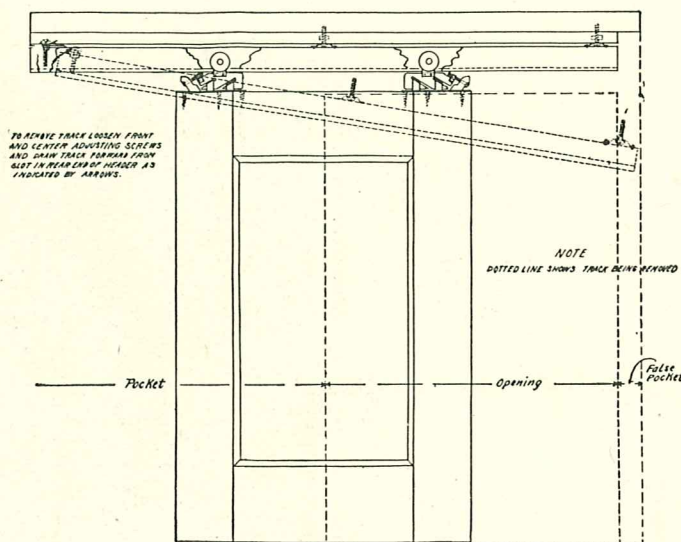


Fig. A. Elevation of Doorway Structure Showing Track Installed, and (Dotted Lines) Unfastened From Header. Slotted Plate and End Adjusting Screw Suspend Track at Back End, (See Upper Left Hand Corner.)

Frequently houses settle after vanishing doors are installed. As a result the doors stick at the bottom and the track becomes out of alignment with the threshold.

That's the point where the accessible adjustment provided in R-W door hangers of the header type is appreciated.

Usually the proper adjustment of the door can be made by turning with a screw driver the accessible adjusting screw of the hanger at one or both edges of the sliding door (Fig. C).

Further adjustment may be secured by raising or lowering the track. This can be easily done by inserting a screw driver in the opening between the soffits through which the hanger pendant travels, and turning the accessible adjusting screws which suspend the track directly over the doorway opening (Fig. C).

Very rarely it is found necessary to raise or lower the end of the track located back in the wall pocket. If it is necessary, the R-W House Door Hanger arrangement makes provision for the adjustment.

By moving the detachable parts of the soffits and jambs and unscrewing the hanger adjusting screws so that the hanger comes apart, the door may be lifted out and the track removed without difficulty. To remove the track it is only necessary to unscrew from the header the adjusting screws in the track over the opening (Fig. C), pull the track forward to disengage it from the slotted plate at the back end (Figs. A and B), and then withdraw it entirely from the pocket.

The adjusting screw at the back of the track (Fig. B) may then be regulated as required; the track again inserted into the pocket; the head of the adjusting screw at the back end of the track slipped into its slot in the header plate; the two screws over the opening screwed into the header—and the track adjustment is complete.

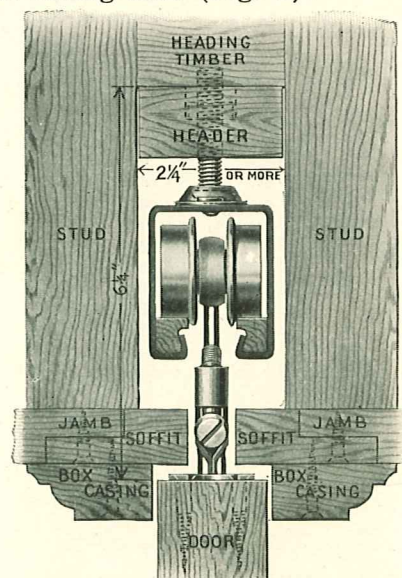
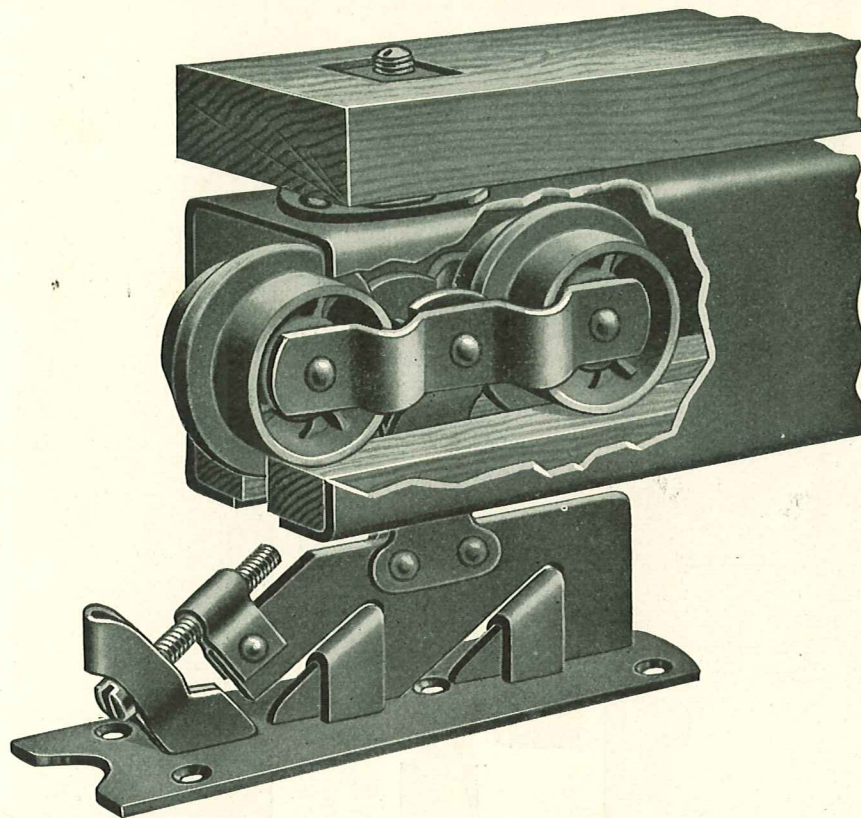


Fig. C. Cross Section of R-W No. 221 Door Hanger Installation Showing Relative Positions of Hanger, Track, Accessible Hanger Adjusting Screw, Accessible Track Adjusting Screw, Header, Door, Soffit and Casing.

Richardson-Wilcox

"A Hanger for any door that slides"

R-W No. R-122 Royal Ball-Bearing Trolley House Door Hanger



Distance top of door to bottom of heading timber, 7¼ inches.

Minimum width of wall pocket, 2¼ inches.

Track can be easily removed without injury to plastered walls.

Track, No. 16 gauge steel and hard maple lined, No. R-122 type, furnished with wood header, adjustable as illustrated. Wheels, grey iron, lathe turned, 2¼ inches diameter. Bearing, steel balls. Finish, blue lacquer. Packed complete with screws, overhead center stop, and floor guides. Weight, full set: hangers, 9½ pounds; track, per foot, 3 pounds.

PRICE LIST OF HANGERS AND TRACK

DOUBLE DOORS			SINGLE DOORS		
Number	Width of Opening	List	Number	Width of Opening	List
R122-24	4 feet	\$8.00	R122-12½	2½ feet	\$4.00
R122-24½	4½ feet	8.00	R122-13	3 feet	4.00
R122-25	5 feet	8.00	R122-13½	3½ feet	4.40
R122-25½	5½ feet	8.00	R122-14	4 feet	4.75
R122-26	6 feet	8.00	R122-14½	4½ feet	5.15
R122-26½	6½ feet	8.40	R122-15	5 feet	5.50
R122-27	7 feet	8.75	R122-15½	5½ feet	5.90
R122-27½	7½ feet	9.15	R122-16	6 feet	6.25
R122-28	8 feet	9.50	R122-16½	6½ feet	6.65
R122-29	9 feet	10.25	R122-17	7 feet	7.00
R122-210	10 feet	11.00	R122-17½	7½ feet	7.40
			R122-18	8 feet	7.75

Hangers only, double doors \$3.50

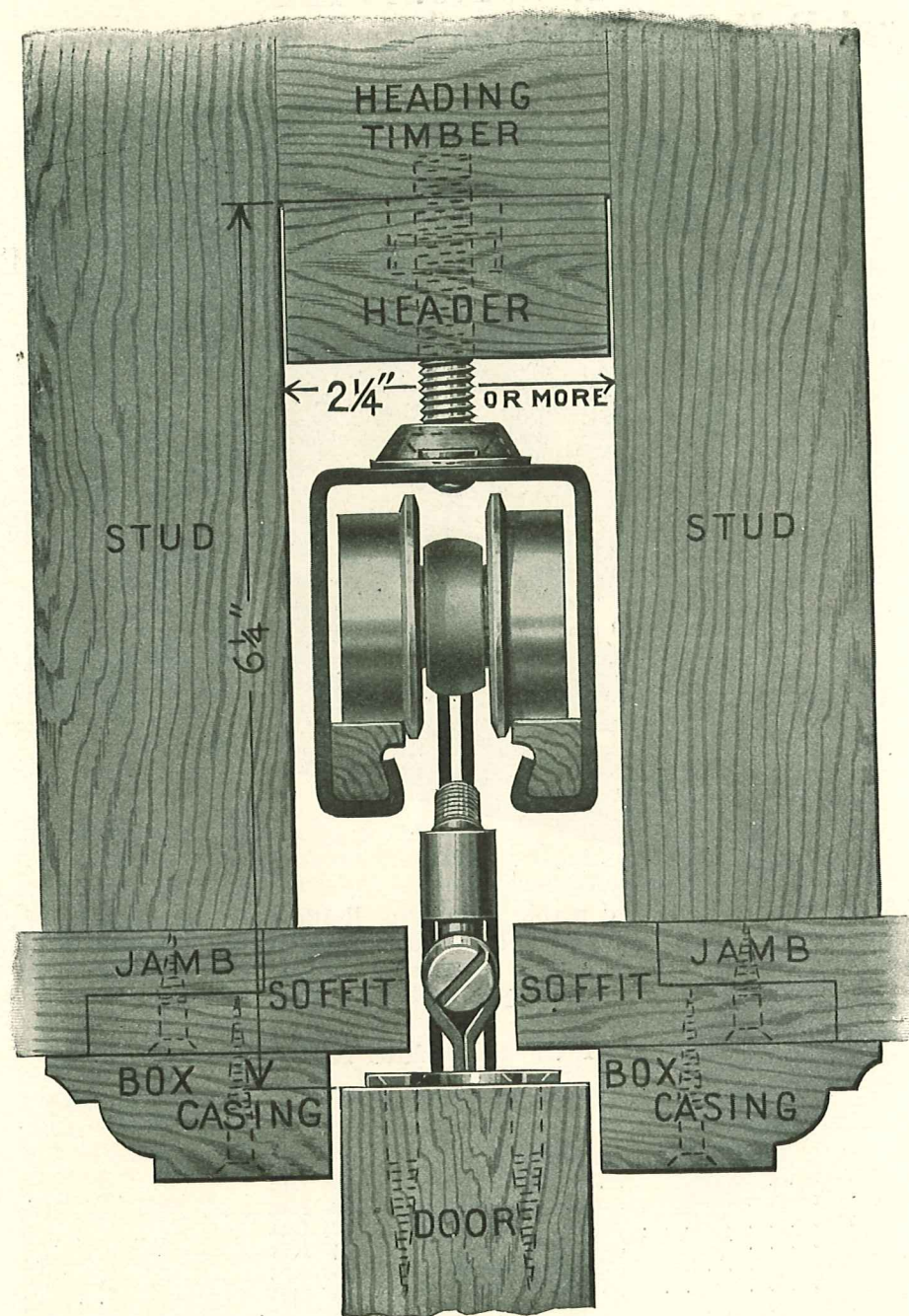
Hangers only, single doors 1.75

Discount.....

Note—When ordering track without hangers, the list price is found by deducting the list price of hangers without track from the list prices given for various lengths. Order by number.

Richards-Wilcox

"A Hanger for any door that slides"



Above cut is a vertical cross-section of No. 221 house door hanger and except as to measurements, also illustrates how our other styles of adjustable tracks and hangers are applied.

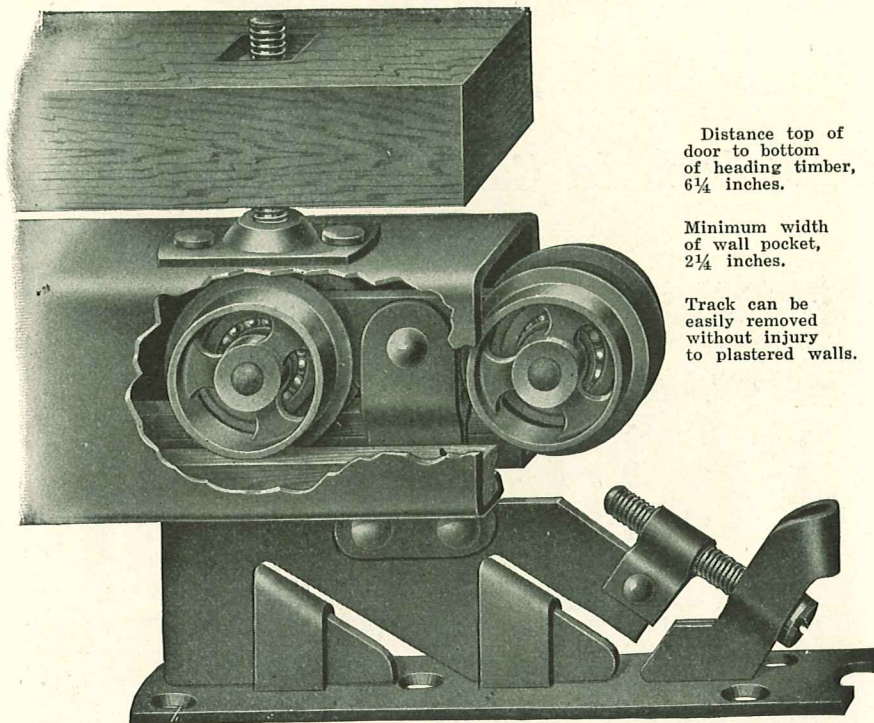
TABLE SHOWING DISTANCE TOP OF DOOR TO BOTTOM OF HEADING TIMBER

Number	Name	Page	Dis. Req'd	Number	Name	Page	Dis. Req'd
6	R-W Rex	5	8 1/2"	R122	R-W Royal	9	7 1/4"
16	R-W Twin	6	6 1/4"	221	R-W Advance . . .	11	6 1/4"
19	R-W Hero	7	6 1/4"				

Richardson-Wilcox

"A Hanger for any door that slides"

R-W No. 221 Advance Ball-Bearing Trolley House Door Hanger



Distance top of door to bottom of heading timber, 6 $\frac{1}{4}$ inches.

Minimum width of wall pocket, 2 $\frac{1}{4}$ inches.

Track can be easily removed without injury to plastered walls.

Track, No. 16 gauge steel and hard maple lined, No. 221 clincher type, furnished with wood header, adjustable as illustrated. Wheels, grey iron, lathe turned, 1 $\frac{1}{8}$ inches diameter. Steel frames and hardened bearings. Finish, blue lacquer. Packed complete with screws, overhead center stop, and floor guides. Weight, full set: hangers, 8 $\frac{1}{2}$ pounds; track, per foot, 2 $\frac{1}{2}$ pounds.

PRICE LIST OF HANGERS AND TRACK

DOUBLE DOORS			SINGLE DOORS		
Number	Width of Opening	List	Number	Width of Opening	List
221-24	4 feet	\$8.00	221-12 $\frac{1}{2}$	2 $\frac{1}{2}$ feet	\$4.00
221-24 $\frac{1}{2}$	4 $\frac{1}{2}$ feet	8.00	221-13	3 feet	4.00
221-25	5 feet	8.00	221-13 $\frac{1}{2}$	3 $\frac{1}{2}$ feet	4.40
221-25 $\frac{1}{2}$	5 $\frac{1}{2}$ feet	8.00	221-14	4 feet	4.75
221-26	6 feet	8.00	221-14 $\frac{1}{2}$	4 $\frac{1}{2}$ feet	5.15
221-26 $\frac{1}{2}$	6 $\frac{1}{2}$ feet	8.40	221-15	5 feet	5.50
221-27	7 feet	8.75	221-15 $\frac{1}{2}$	5 $\frac{1}{2}$ feet	5.90
221-27 $\frac{1}{2}$	7 $\frac{1}{2}$ feet	9.15	221-16	6 feet	6.25
221-28	8 feet	9.50	221-16 $\frac{1}{2}$	6 $\frac{1}{2}$ feet	6.65
221-29	9 feet	10.25	221-17	7 feet	7.00
221-210	10 feet	11.00	221-17 $\frac{1}{2}$	7 $\frac{1}{2}$ feet	7.40
			221-18	8 feet	7.75

Hangers only, double doors \$3.50
Hangers only, single doors 1.75

Discount.....

Note—When ordering track without hangers, the list price is found by deducting the list price of hangers without track from the list prices given for various lengths. Order by number.

Richardson-Wilcox

"A Hanger for any door that slides"



Patented

The Right Idea In Casement Window Hardware



A cheery sun parlor in winter, equipped with "AiR-Way" Fixtures.
Windows tight, glass area great, effect luxurious.

What adds more enjoyment to home life in winter than a finely appointed sun parlor? What gives a brighter, happier out-of-doors effect in the home, either winter or summer? Nothing—if the window conditions are right.

That's the point at which "AiR-Way" fixtures become interesting.

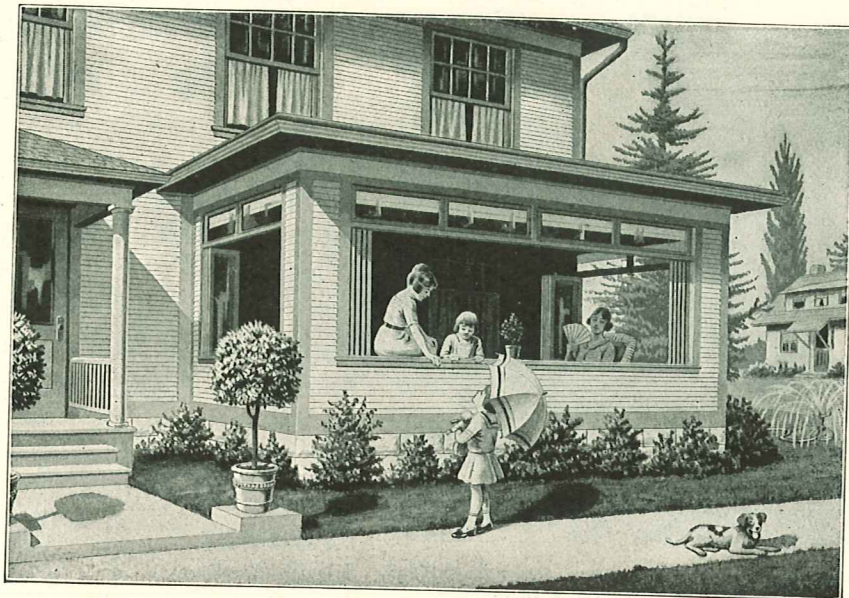
Multifold AiR-Way Window Hardware makes possible all of the features desirable in window construction of the sun parlor, sleeping porch, bungalow—any multiple window which occupants of the building desire to open entirely. Affords perfect ventilation and light—closes weathertight, keeps out wind and storm.

Builders of residences, hotels, hospitals, sanitariums, schools, libraries, clubs, apartments and flats use this style of windows extensively.

Makes it convenient to convert in-doors to out-doors and vice versa at a moment's notice.

Richards-Wilcox

"A Hanger for any door that slides"



A sun parlor in summer, "AiR-Way" equipped. Windows thrown wide open.
No mullions or other obstructions in opening.

WINDOWS OPEN INSIDE BUILDING

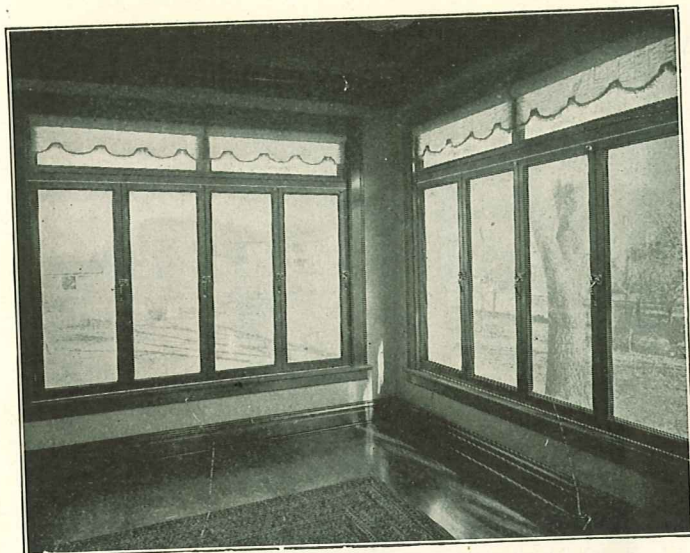
Multifold windows operating on "AiR-Way" Window Hardware open inside and do not interfere with screens, which may be applied to "AiR-Way" equipped windows in the same manner as to ordinary windows operating vertically. Wind and draught will not blow sash equipped with "AiR-Way" hardware, as they stand immovable in any position, open or closed, without locks or holders.



Would breakfast in the cool atmosphere of this open porch appeal to you in summer? It is "AiR-Way" equipped. Screens applied outside in logical and convenient position.

Richards-Wilcox

"A Hanger for any door that slides"



Corner of sun parlor interior furnished with Multifold Windows equipped with "AiR-Way" hardware. Windows closed tight.

Storm-Tight

Plans and details on pages 16-17 show how casing and sash should be constructed. To make the window storm-tight the vertical joints between sash are rabbetted, top sash closes against stop and the storm sill is fitted close to bottom of sash with no projection to direct the water between sash and storm sill. The pressure of water striking the bottom of the sash is first obstructed by the storm sill which breaks up its force. The small amount of seepage which may fall through the joint between the bottom of the sash and the storm sill will run down into

the air space behind the storm sill. From this space it is drained to the outside of the building by drain holes drilled through the bottom of the window frame.

There is no direct connection between the outside and the lower track and therefore there is no opportunity for water to get into the track or inside the building. The storm sill serves as the outside protection of a tight air space which keeps out the cold. The storm sill and the track both come up tight against the bottom of the sash. The fact that the windows open inside the building permits their being washed readily and removes danger and inconvenience connected with washing windows from outside the building. We will furnish metal storm sill, as illustrated (Fig. 8) to take the place of wooden sill, when desired. The metal threshold is furnished as an addition to the set of fixtures when wanted. Set prices on page 15 do not include this metal threshold.

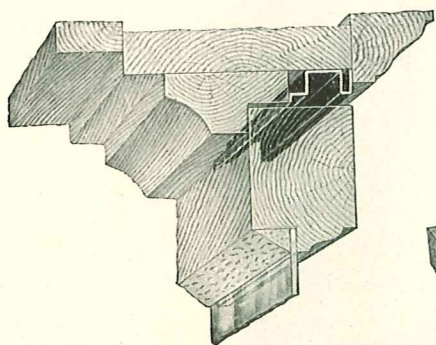


Fig. 6. Cross-section thru sash and window frame at top showing installation of "AiR-Way" track above sash and tight application of sash.

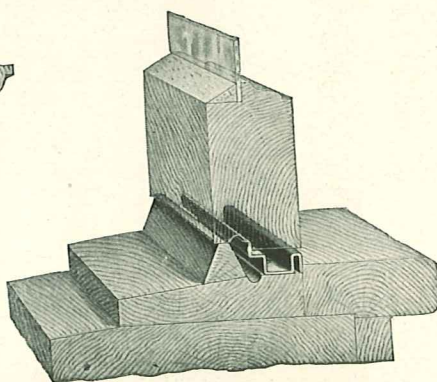


Fig. 7. Cross-section thru sash and window frame at bottom showing installation of "AiR-Way" track below sash and the tight application of sash. Note arched groove in bottom of sash just back of wood threshold, or storm sill—this groove obviates the possibility of moisture following the bottom of the sash.

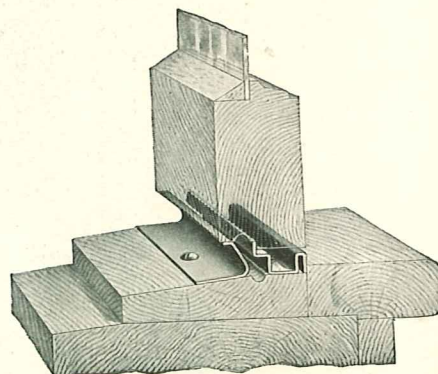


Fig. 8. Cross-section thru sash and window frame at bottom showing installation of "AiR-Way" track below sash and tight application of sash using special metal threshold or storm sill. Note arched groove in bottom of sash just back of threshold. This groove obviates the possibility of moisture following the bottom of the sash.

Richards - Wilcox

"A Hanger for any door that slides"

Convenience of Ventilation

"AiR-Way" Window Hardware gives opportunity to thrown open the entire window frame; or one sash at any particular point in the string of sash (See Fig. 11); or any number of sash desired (See Fig. 10). The Windows may be placed in such a position that the wind will not blow directly into the room. The windows may be constructed with stationary mullion, or moving split mullion, part of the sash moving to the right and part to the left; or they may be arranged to move all in one direction. When wide open the sash fold together at an angle against the casing at the edge of the window, leaving practically all of the window opening clear of obstruction.

"AiR-Way" hardware is applied to any number of sash the builder may want to place in a row, but we recommend that not more than 6 sash be installed to form a string sliding one way. Height of the window does not affect the operation of this hardware, but the hardware is designed for sash not more than 12 square feet in area and maximum width of sash not to exceed 24 inches. It is advisable to keep each opening within the limitation of a span 11 feet in width for windows having transom sash when our standard design of transom bar is used, or 20 feet for windows having no transom sash and a total vertical sash height of six feet.

Spans can be kept down to this size conveniently by the use of solid mullions. Larger sash require special construction details. When transoms are installed shades may be fastened to transom sash; without transoms, American (Austrian) shading may be attached directly to each sash.

Sash and frames must be constructed to detail furnished by the Richards-Wilcox Manufacturing Company.

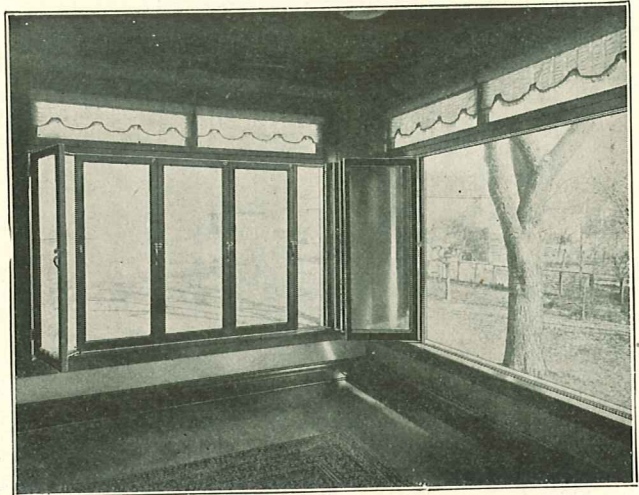


Fig. 9. Interior view of sun parlor "AiR-Way" equipped—front windows wide open, side window open at both ends.

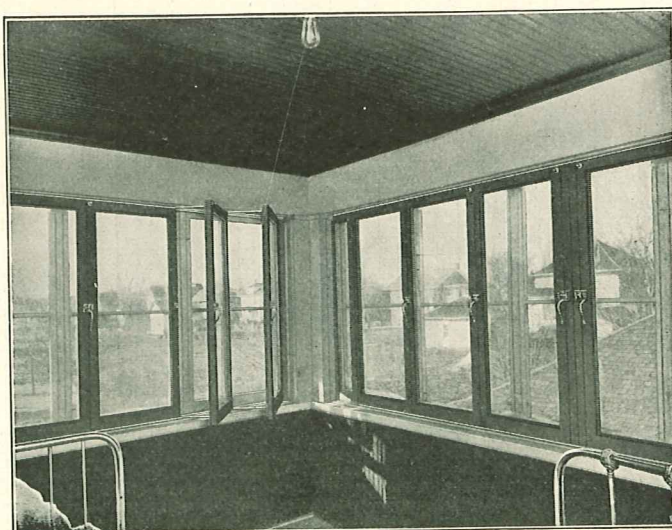


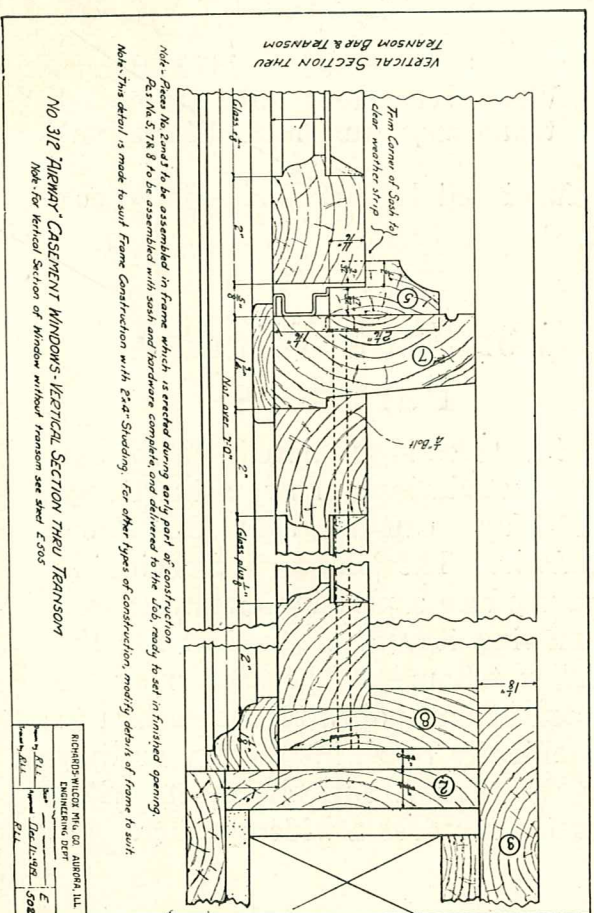
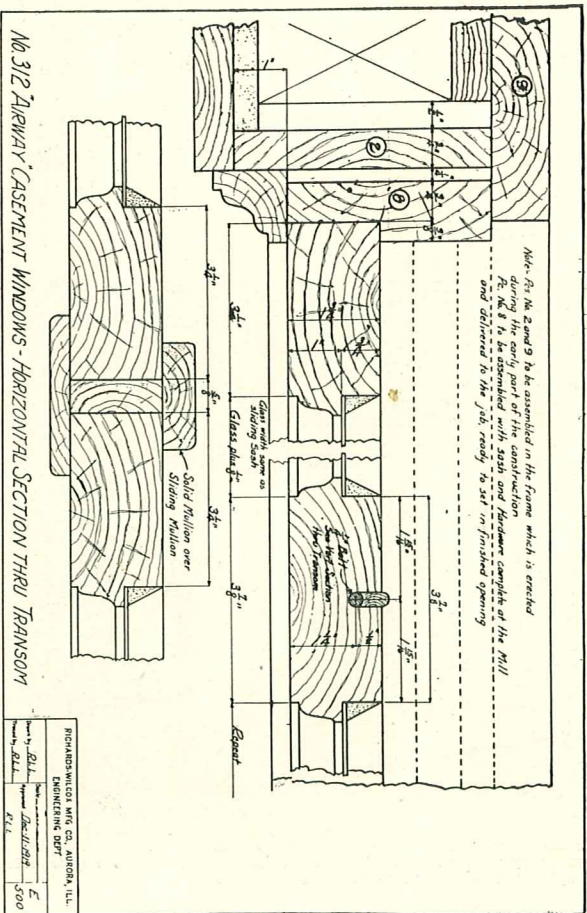
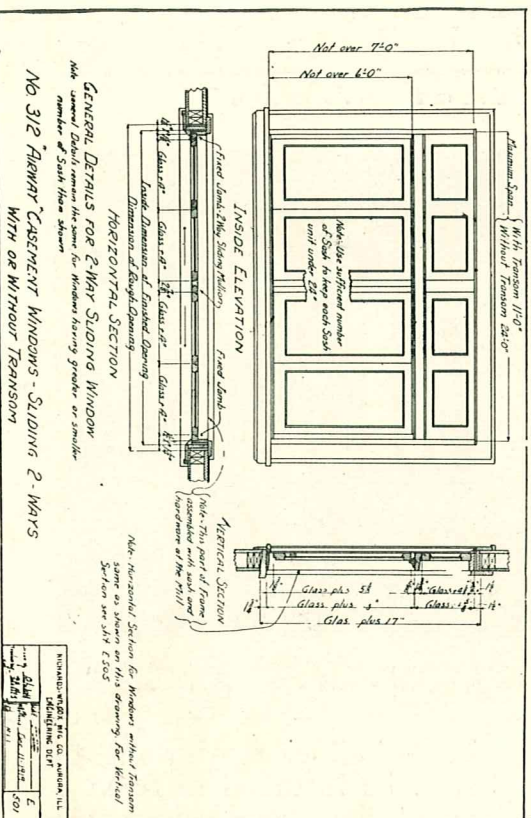
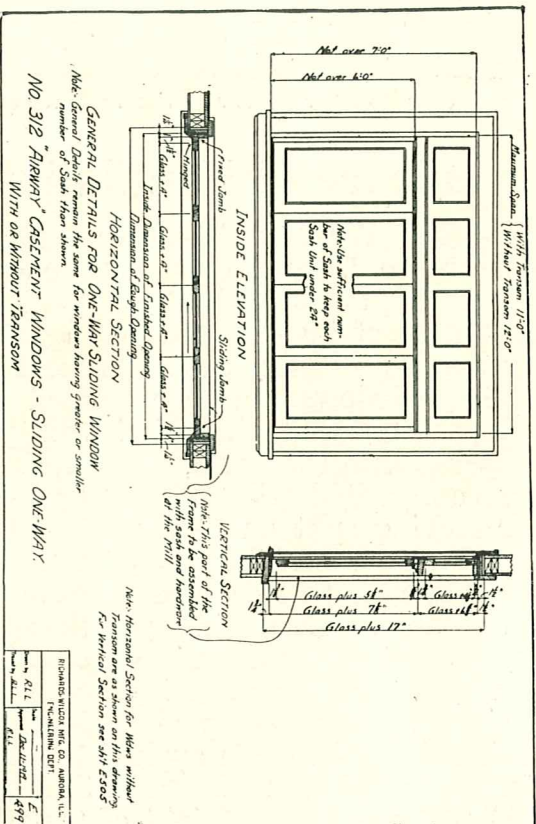
Fig. 10. Sleeping porch equipped with "AiR-Way" Multifold Window Hardware. All sash are closed except two which are open about 45 degrees. "AiR-Way" sash link can be plainly seen at the top and bottom of both these open sash. Note screens on these windows do not interfere with the operation of the "AiR-Way" equipped sash.

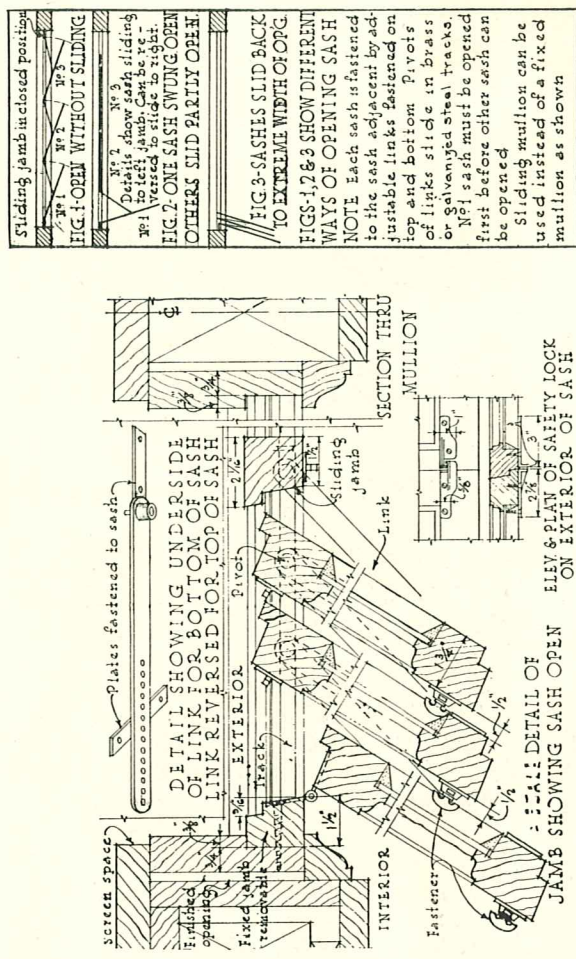
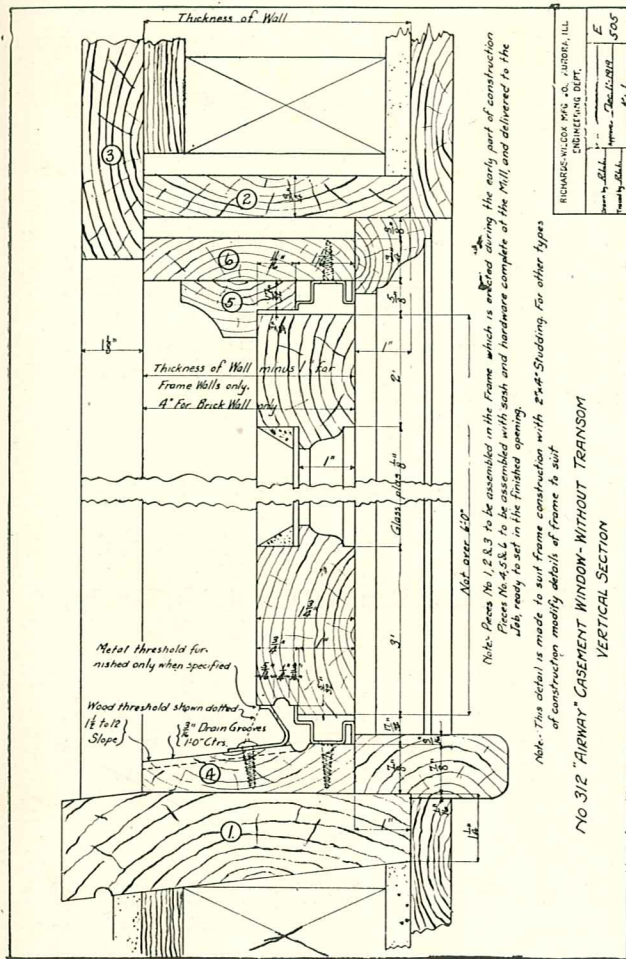
For Show Window Partitions

It is interesting to note in one of our late installations, how attractively "AiR-Way" can be used for Show Windows. The sliding and swinging sash produce a pleasing effect, as well as making it very convenient for the window trimmer. The sash may be opened at any point, to enable him to conveniently reach his display or they may be thrown entirely open, when occasion requires a wide opening.

Plans and Details

A set of working blueprints similar to those shown below, will be gladly furnished on request. It is essential to construct sash according to details shown





Richards-Wilcox

"A Hanger for any door that slides"

Hardware

The appliance we furnish is fully protected by patents and consists of sash links (Fig. 18) which connect sash at top and bottom; metal tracks for top and bottom guides (Figs. 6 and 7); butts for sash adjacent to fixed jamb; a combination fastener and handle (Figs. 13 and 14) brass chafing plates (Fig. 15); rubber stops (Fig. 16) and safety locks (Fig. 17) for each sash. Two types of fasteners and handle are carried in stock, one with bow handle and one with finger grip. For high windows it is advisable to use two fasteners for each sash. In that case the bow handle may be used near the bottom and the finger grip type near the top.

Finish

Finish No. 1.—Solid brass. Sash links and fasteners, brush brass finish. Safety locks, dull brass. Tracks, natural brass finish.

Finish No. 2.—Sash links and fasteners plated, brush brass finish. Safety locks solid brass, dull brass finish. Tracks, electro-galvanized.

Finish No. 3.—Sash links, fasteners, safety locks, dull black, imitation Bauer-Barrf finish. Tracks, electro-galvanized.

Cost

The installation of "AiR-Way" Multifold Window Hardware instead of costing more on account of the additional advantages it embodies over ordinary window hardware actually costs less. The saving of lumber and carpenter work alone more than offsets the cost of "AiR-Way" hardware.

Specifications

We must have the following information in order to fill an order for "AiR-Way Window Hardware":

1. Total number of sliding sash in each window.
2. Height and width of each sash.
3. Do windows open both ways from the center of the opening or do all the windows open in the same direction from one side?
4. When sash fold to one side only, state whether they fold to right or to left as you face the window from the inside.
5. Finish of hardware wanted: No. 1 finish; No. 2 finish; No. 3 finish; No. 2 finish with solid brass track; No. 3 finish with solid brass track.
6. Thumb fasteners or bow handle fasteners? For sash over 5' high state whether two thumb fasteners are wanted or one thumb fastener and one bow handle fastener for each sash.

We furnish complete detail from which to construct sash and frame in accordance with builder's requirements. Special construction of sash makes it necessary to follow carefully details furnished by the Richards-Wilcox Mfg. Co.

Hardware is made for sash not over 24" wide and not more than 12 square feet in area.

Mill Work

"AiR-Way" windows can be made and assembled complete with hardware, at the Mill, if desired. This relieves the builder of the responsibility of installing the windows, and also does away with the possibility of poor installations, due to careless carpenters. The Mill furnishes a frame which is installed during the early part of construction, as usual, and then builds the windows into another very light frame, and assembles with all hardware. When delivered to the job, it is simply necessary for the carpenter to set it in the finished opening, line it up and fasten.

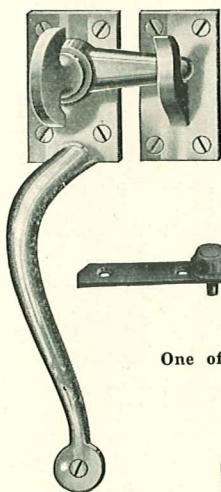
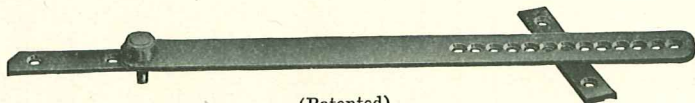


Fig. 13.
Fastener with
bow handle



(Patented)
Fig. 18. "AiR-Way" adjustable link.
One of these links connects each sash, at the top and
bottom, with the sash adjacent.



Fig. 17. Safety Lock.

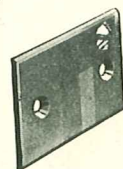


Fig. 15
Chafing Plate

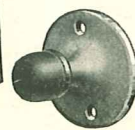


Fig. 16.
Rubber Stop.

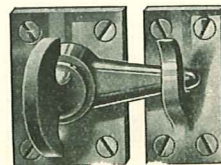


Fig. 14.
Thumb
Fastener.

AiR-Way Specification Sheet

Please fill out this information blank so that we may advise more fully regarding your requirements. If more than one window is to be fitted please answer the first group of questions separately for each window. We suggest also that you make a rough sketch of your plans on back of this sheet.

WINDOWS

How many windows do you wish to equip? _____

a.	Total number of sash in the window.....	.....	.....	.....
b.	Do you wish the sash all to open one way.....	.....	.....	.....
	or part of them to open each way.....	.....	.....	.....
c.	If all open one way, will they fold to right.....	.....	.....	.....
	or left (as you face opening from inside).....	.....	.....	.....
d.	If the sash are to fold both to right and left, how many			
	will fold to the right?.....	.....	.....	.....
	And how many to the left?.....	.....	.....	.....
e.	Height of each sash.....	.....	.....	.....
f.	Width of each sash .....	.....	.....	.....

GENERAL QUESTIONS ABOUT YOUR CONSTRUCTION

- h. If sash are less than 5 feet high, do you desire bow handles _____ or thumb fasteners _____?
- i. If sash over 5 feet high, do you desire one bow handle and one thumb fastener to each sash _____; or two thumb fasteners _____?
- j. Please check finish desired: No. 1 _____; No. 2 regular _____; No. 2 with solid brass track _____; No. 3 regular _____; No. 3 with solid brass track _____.
- k. If special Storm Threshold is desired please indicate whether you wish steel _____ or brass _____.

Remarks:

Your Name Address

(Mail to the Richards-Wilcox Mfg. Co., Aurora, Ill.)

(Tear out and mail direct to the R-W Mfg. Co., Aurora, Ill.)

Richardson-Wilcox

"A Hanger for any door that slides"

AiR-Way Specification Sheet

Please fill out this information blank so that we may advise more fully regarding your requirements. If more than one window is to be fitted please answer the first group of questions separately for each window. We suggest also that you send a rough sketch of your plans with this sheet.

How many windows do you wish to equip? _____

WINDOWS

	1st	2nd	3rd
a. Total number of sash in the window.....
b. Do you wish the sash all to open one way.....
or part of them to open each way.....
c. If all open one way, will they fold to right.....
or left (as you face opening from inside).....
d. If the sash are to fold both to right and left, how many			
will fold to the right?.....
And how many to the left?.....
e. Height of each sash.....
f. Width of each sash

GENERAL QUESTIONS ABOUT YOUR CONSTRUCTION

- h. If sash are less than 5 feet high, do you desire bow handles _____ or thumb fasteners _____?
- i. If sash over 5 feet high, do you desire one bow handle and one thumb fastener to each sash _____; or two thumb fasteners _____?
- j. Please check finish desired: No. 1 _____; No. 2 regular _____; No. 2 with solid brass track _____; No. 3 regular _____; No. 3 with solid brass track _____; (See page 18).
- k. If special Storm Threshold is desired please indicate whether you wish steel _____ or brass _____.

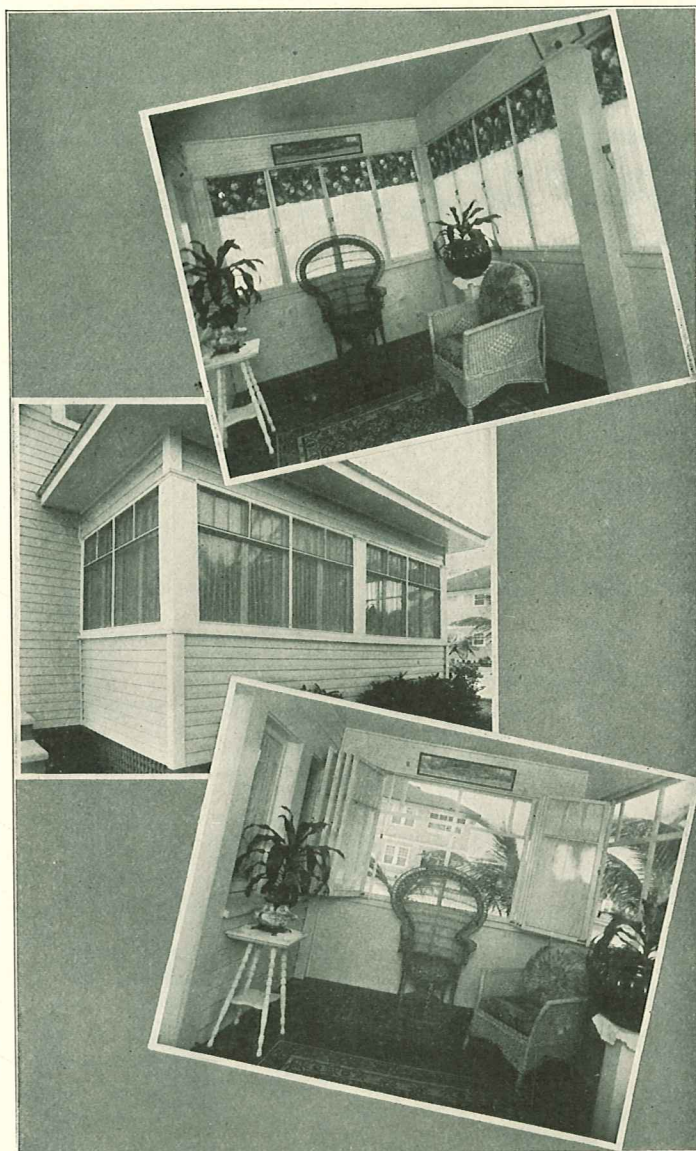
Remarks:

Your NameAddress

(Tear out and mail direct to the R-W Mfg. Co., Aurora, Ill.)

Richards-Wilcox

"A Hanger for any door that slides"



"We have yet to have the first person come on this porch, who has not been struck with the arrangement of the windows," says Mr. Frost. Top View shows interior of porch with AiR-Way windows closed. Center view, exterior with windows closed. Bottom view, interior with windows wide open. They do not interfere with screens at all.

ONE OF THE MANY

The letter quoted below is typical of many which we have received from satisfied home-owners:

Milton, Penn'a.,
"I mailed to you today, under separate cover, a photograph of my sun room in which I installed the hardware which I purchased from you."

"I want to say to you again that I am certainly well pleased with the hardware. I have had absolutely no trouble in opening the windows and everyone who has seen the lay-out say they have never seen anything like it. We practically lived in the sun room all summer and the combinations we were able to make for ventilation were most unusual." Yours very truly,

"W. W. Wilson.



MULTIFOLD WINDOW INSTALLATION OF FROST HOME AT WEST PALM BEACH

"We do not believe that there is anybody in the United States who appreciates AiR-Way multifold window hardware more than our family," says W. E. Frost, Secretary and Manager of the East Coast Hardware Company, West Palm Beach, Fla., in a recent letter. "Our house faces east and south, which is the prevailing direction of the storms in this section, and formerly every time there was a thunder shower or storm we had a drenched porch, as the rain would blow three-quarters of the way across it and flood the floor. It was impossible to keep a varnished floor or any kind of furniture in the porch as the weather ruined it.

Now when it rains we have an enclosed room. And in pleasant weather we have an open porch. During the winter months in the chilly mornings we have a room that is easily heated up with a Perfection Oil Heater.

If you will glance at the interior picture with the windows open you will notice that we have divided the sash—this is a 5' 4" x 2' sash. Then, if you will refer to the interior picture, windows closed, you will notice that we have an overdrap over the lace curtains. As this is only a photograph, you cannot appreciate the beauty of the room—the photographer in taking this photograph removed some of the furniture, so as not to have it too crowded.

"We have yet to have the first person come on this porch who has not been struck with the arrangement of the windows. I took an architect out there the other day, who declared that in the future on all of his open work in Palm Beach he will use the AiR-Way fixtures."



This porch kept warm in winter, cool in summer by "AiR-Way" Fixtures

Richardson-Wilcox

"A Hanger for any door that slides"

Price List of Hardware

PER SASH

HARDWARE	Finish No. 1	Finish No. 2	Finish No. 3	Finish No. 2 with solid brass track	Finish No. 3 with solid brass track
Sash Width 15"; Height up to 5'.					
Without fasteners	\$5.60	\$4.10	\$3.10	\$5.20	\$4.20
Including 1 thumb fastener	6.70	4.70	3.70	5.80	4.80
Including 1 bow handle fastener.....	7.80	5.80	4.80	6.90	5.90
Sash Width 15½" to 19½"; Height up to 5'					
Without fasteners	6.20	4.30	3.30	5.60	4.60
Including 1 thumb fastener	7.30	4.90	3.90	6.20	5.20
Including 1 bow handle fastener.....	8.40	6.00	5.00	7.30	6.30
Sash Width 19¾" to 24"; Height up to 5'					
Without fasteners	6.80	4.50	3.50	6.00	5.00
Including 1 thumb fastener	7.90	5.10	4.10	6.60	5.60
Including 1 bow handle fastener.....	9.00	6.20	5.20	7.70	6.70
Sash Width up to 15"; Height 5'1" to 6'.					
Without fasteners	6.40	4.90	3.90	6.00	5.00
Including 2 thumb fasteners	8.60	6.20	5.20	7.30	6.30
Including 1 thumb and 1 bow handle fastener.....	9.70	7.20	6.20	8.30	7.30
Sash Width 15½" to 19½"; Height 5'1" to 6'					
Without fasteners	7.00	5.10	4.10	6.40	5.40
Including 2 thumb fasteners	9.20	6.40	5.40	7.70	6.70
Including 1 thumb and 1 bow handle fastener.....	10.30	7.40	6.40	8.70	7.70
Sash Width 19¾" to 24"; Height 5'1" to 6'.					
Without fasteners	7.60	5.30	4.30	6.80	5.80
Including 2 thumb fasteners	9.80	6.60	5.60	8.10	7.10
Including 1 thumb and 1 bow handle fastener.....	10.90	7.60	6.60	9.10	8.10
Special steel storm threshold not included in above prices, per foot, .30; Brass .50.					
Butts not included in above prices, per pr.....	2.60	.60	.60		

Butts are required only for first sash adjoining jamb toward which windows fold in opening, and are not included in prices shown above. One pair recommended for sash up to 5 feet high. 1½ pair for sash 5 feet to 6 feet high.

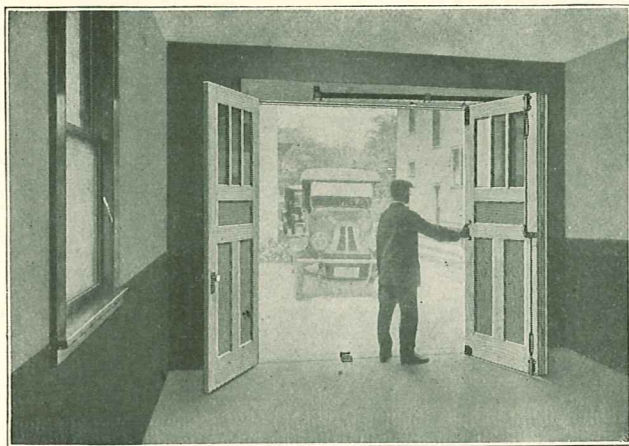
One safety lock is furnished for each sash up to 5 feet high; two safety locks furnished for each sash 5 to 6 feet high.

PRICE LIST OF PARTS

	Finish No. 1	Finish No. 2	Finish No. 3
No. 312 Bow Handle fasteners, each	\$2.50	\$2.00 ✓	\$1.75
No. 312 Thumb fasteners, each	1.80	1.10	.90
No. 312 Chafing Plates, each .....	.40	.30 ✓	.20
No. 312 Rubber Stops, each .....	.80	.60 ✓	.40
No. 312 Safety Locks, each	1.60	1.20 ✓	.80
No. 312 Sash Links, each	2.50	2.00 ✓	1.50
No. 312 Lower Track, per ft.....	(Brass) \$.80	(Galv.) \$.25	
No. 312 Upper Track, per ft.....	(Brass) .60	(Galv.) \$.20	
Discount.....			

Richards-Wilcox

"A Hanger for any door that slides"



Slidetite
Patented

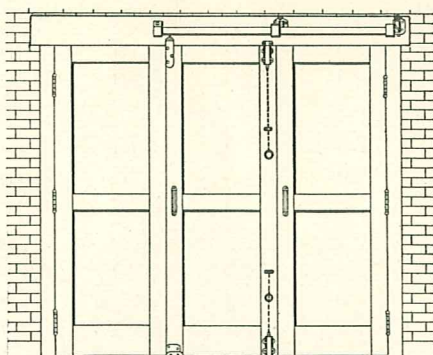
R-W No. 435 Garage Door Hardware

For Private and Public Garage Doors

Garage doors equipped with this fixture fold and slide inside building, requiring only minimum space. Recommended for doors not over three feet wide.

The 3-door "Slidetite" set of hardware makes an ideal equipment for the ordinary garage doorway, two of the doors folding to one side of the opening, the third door being hinged to the jamb or to the middle door. When desired, however, any number of doors from 4 to 10 in one opening can be used. A ten door outfit will take care of an opening up to 30 ft. wide.

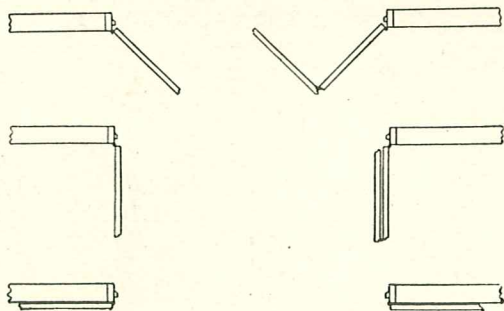
Doors hung on Slidetite Hardware fit perfectly tight, are weather-proof and cannot sag. The R-W "Slidetite" equipment permits the use of part or all of the opening and prevents warping of doors at the top. Slidetite makes possible the use of doors corresponding with the style of architecture of the residence with which the garage is associated.



Elevation showing proper location of "Slidetite" three-door hardware including R-W No. 514 Bolts.

A 3 Door Set consists of the following

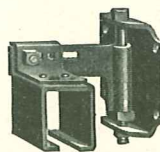
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|---------------------------------------------|----------------------------------------|
| 1 R-W No. 435 Hanger. | 7 feet R-W No. 31 Track (1-7ft.) |
| 1 R-W No. 435-C Center Bracket. | 1 R-W No. 71-2 Bow Handle. |
| 1 R-W No. 435-E End Bracket. | 1 R-W No. 271 Center Guide. |
| 1 R-W No. 435-I Intermediate Bracket. | 2 R-W No. 301-72 Bumper Shoes. |
| 3 pair R-W No. 435 Japanned Butt Hinges. | 2 R-W No. 514 Top and Bottom Bolts, or |
| 1½ pr. R-W No. 435 Japanned Surface Hinges. | 1 R-W No. 517 Top and Bottom Bolt. |



Floor plans of three-door "Slidetite" doorway, showing doors partially opened, doors open parallel with sidewalls, doors open parallel with front wall, giving absolute clearance from jamb to jamb.



No. 435 Hanger



I—Intermediate Bracket



C—Center Bracket

Richards-Wilcox

"A Hanger for any door that slides"

Slidetite

Patented

R-W No. 435 Garage Door Hardware

(Continued)

We furnish all necessary hardware except the lock for the entrance door. Direction sheet, showing the details, furnished with each order. Packed, complete sets, in wood box, less track.

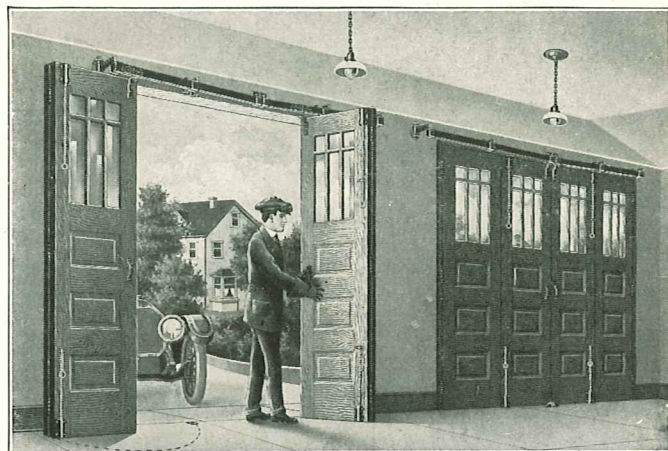
Intermediate and end brackets are adjustable. Brackets are swiveled to permit track to be set at angle suitable to thickness of doors. Hangers support and guide the end of the door and prevent sagging. Wheels are grey iron, lathe turned. Vertical adjustment. Ball-bearing swivel pendants.

A 4 Door Set consists of:

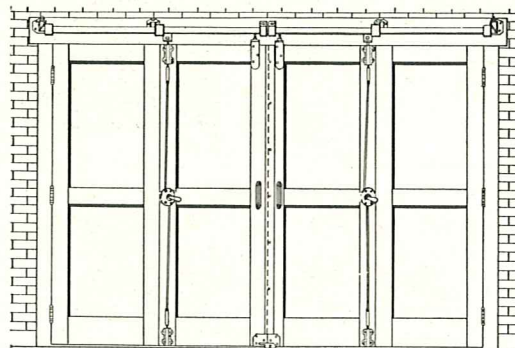
- | | |
|------------------------------------------|----------------------------------------------------------|
| 2 R-W No. 435 Hangers. | 14 feet R-W No. 31 Track. |
| 2 R-W No. 435-C Center Brackets. | 2 R-W No. 71-2 Bow Handles. |
| 2 R-W No. 435-E End Brackets. | 1 R-W No. 271 Center Floor Guide. |
| 3 Pair R-W No. 435 Japanned Butt Hinges. | 4 No. 301-72 Bumper Shoes. |
| 3 Pair No. 435 Japanned Surface Hinges. | 4 R-W No. 514 Top and Bottom Bolts or two No. 517 Bolts. |

Note: "Slidetite" is made for openings having from three to ten doors.

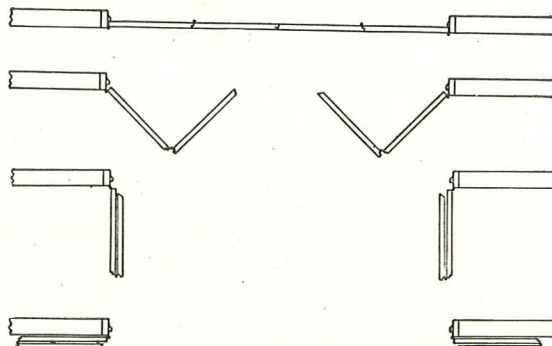
See our special Garage equipment catalog No. A-22.



"Slidetite" two-track, four door hardware on double doorway showing doors in closed position, partially opened position, and wide open position.



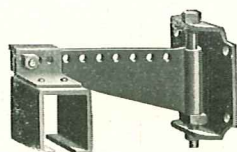
Elevation showing proper location of "Slidetite" two-track four-door hardware, including No. 517 Cremone Bolts, or No. 417 Top and Bottom Bolts.



Floor plans of two-track four-door "Slidetite" doorway, showing (1) doors closed, (2) doors partially opened, (3) doors open parallel with sidewalls, (4) doors open parallel with front wall, giving absolute clearance from jamb to jamb.



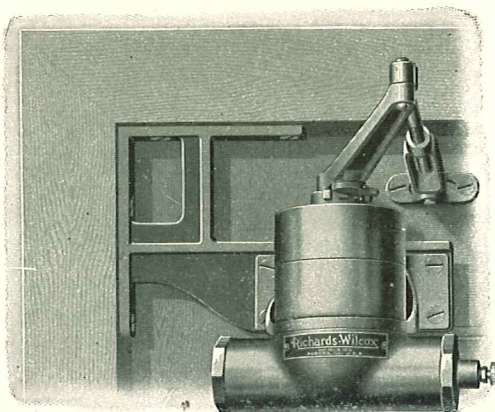
No. 31 Track.



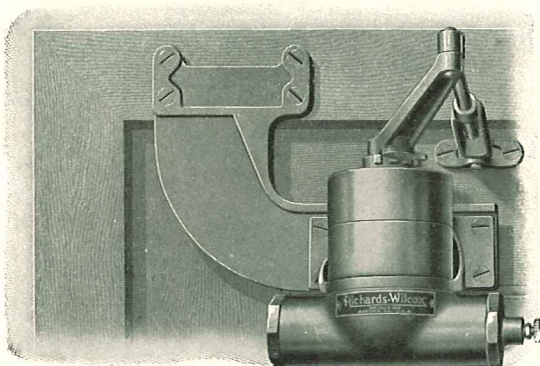
E-End Bracket

Richards-Wilcox

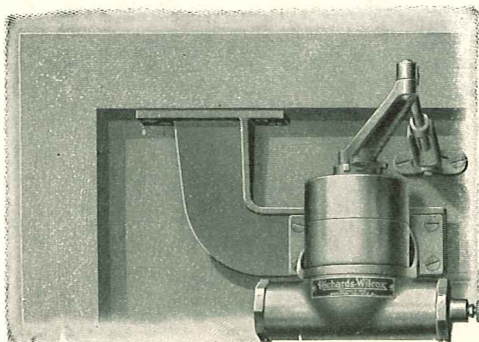
"A Hanger for any door that slides"



Attachment by Corner Bracket



Attachment by Flush Bracket



Attachment by Soffit Bracket

R-W No. 643 Door Closer and Check

The R-W No. 643 Door Closer and Check is a worthy unit of the R-W line and conforms in every respect to the high character established by Richards-Wilcox products. It will establish itself in your community if you give it a start.

All working parts are made of gray iron, malleable iron and steel drop forgings. No special wrenches or tools are required in assembling or winding up the spring. A screw driver is all that is necessary to take the check apart. The check can go together only the right way, making assembling mistakes impossible.

Fitted with soffit, flush or corner bracket, or furnished without bracket if desired.

Regularly finished in gold bronze. Finished in silver bronze or ivory black without additional charge. Prices for other finishes on application.

This check is being specified by architects and demanded by the home builder for the following reasons:

It can be attached to right or left hand swing doors. Can be changed from right to left hand by simply swinging the arm from one side to the other.

It has a simple and effective spring adjustment. Tension of the spring is adjustable to suit any condition. Spring cannot be overwound.

The liquid occupies separate chamber from spring mechanism which prevents leakage of oil. This liquid is a non-freezing oil which has high lubricating qualities so essential in a door check. All parts are machined to a perfect fit and are interchangeable. Made in six sizes, for various weights of doors, from light screen doors to heavy outside doors and those operating against very strong drafts.

BRACKETS

Prices on different Style of Brackets in Gold Bronze, Ivory Black or Silver Finish.

Style of Bracket	No.1 Size	No.2 Size	No.3 Size	No.4 Size	No.5 Size	No.6 Size
Soffit Bracket .	.15	.20	.30	.35	.40	.45
Flush Bracket .	.30	.30	.35	.50	.55	.55
Corner Bracket .	.50	.60	.65	.70	.75	.85

Discount

TABLE OF SIZES AND PRICES

Size	Description of Doors	Weight Each	List Price Each	Size	Description of Doors	Weight Each	List Price Each
1	For screen and very light interior doors.	6 lbs.	\$3.25	4	For heavy interior doors or medium weight outside doors not exceeding 3 feet wide	12 lbs.	\$6.00
2	For light interior doors not exceeding 3 feet wide and vestibule doors not exceeding 2 ft. 6 in. wide.	7½ lbs.	4.25	5	For heavy outside doors not exceeding 3 feet 6 inches wide.	15 lbs.	8.00
3	For medium weight interior doors not exceeding 3 feet wide, or light outside doors not exceeding 2 feet 6 inches wide.	10 lbs.	5.00	6	For extra heavy outside doors operated against very strong drafts	18 lbs.	10.00

The above calculations are based on Standard doors. Extra heavy doors or doors subject to strong drafts require a check one size larger than specified. Checks are furnished regularly in gold bronze. Checks furnished in silver bronze or ivory black at the same prices as gold bronze. Prices for special finishes on application.

Floor Plans of the Home Beautiful

